



Smoke Signals

Newsletter of Fullerton Radio Club

May 2017

May 2017 President's column

I spent last weekend doing some local camping at O'Neill Regional Park in Live Oak Canyon. Friday afternoon, after setting up camp, my wife, KK6QLY, and I took a 20-minute walk from Arroyo Campground to one of our favorite Mexican restaurants, The Rose Canyon Cantina. It was Friday night, but we hadn't bothered making a reservation since we were going to arrive pretty early - about 5 o'clock. As we walked up the road toward the restaurant, we were surprised to see that the parking lot was full, and there were cars driving up and down the road looking for parking far from the restaurant (glad we didn't have to find a parking space!) I glanced at my watch and noticed the date, May 5. Oh!!! Now I get it!!! The wait was an hour, but the food and margaritas were good (and we didn't have to drive back to camp).

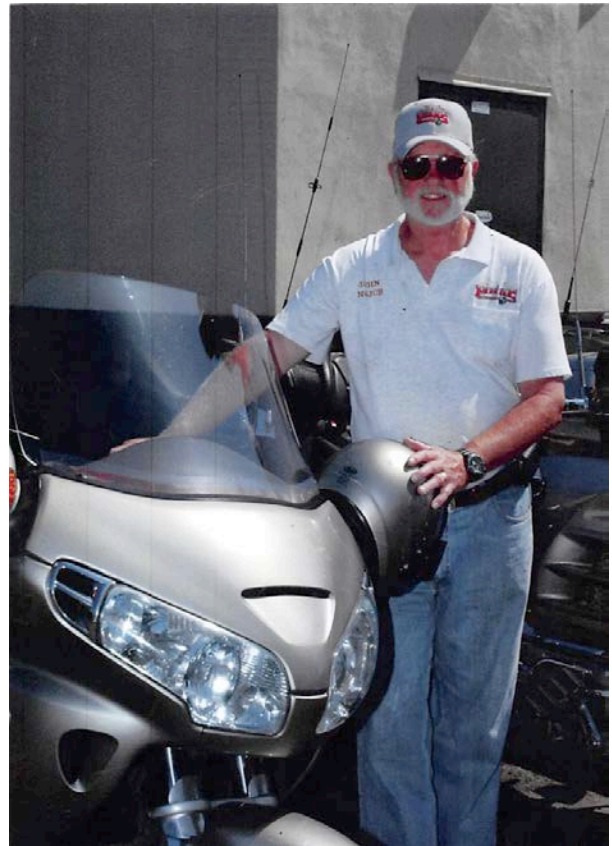
Thanks to all who showed up and donated their time and communications expertise for the Donate Life Run / Walk. Gene Thorpe, KB6CMO, deserves a special thank you for organizing the ham radio aspect of this event. From my perspective, things went smoothly, and our club members (and others) provided a valuable communications service to the community.

This coming Wednesday our FRC guest speaker will be John Beckwith, N6JCB. John is a member of the Motorcycling Amateur Radio Club and will be talking about his experiences operating motorcycle mobile. We all know that mobile radio installation has become a challenge on modern automobiles - it's even more difficult to get the ergonomics (and resulting safety) right when mounting a rig and antenna on a motorcycle. Come hear John's experiences and see the set-up on his bike. Maybe I will be inspired to ride my Triumph to the meeting.

I'm looking forward to seeing all of you this Saturday (5/13) at Antennas in the Park. Come join your fellow club members at Hillcrest Park for burgers and hot dogs, radios, communications trailer demo, ARDF, and some good conversation. Albert Solomon, AG6OF, will be our chief chef. The weather is predicted to be in the mid-seventies. The fun will start about 0900.

73, Bob - AD6QF

May Meeting Presentation



John Beckwith, N6JCB
Ham (General) since 2000
Coast Guard Radioman -1965

Involved in many events supporting communications;
ADA, MS, Tour de Cure, Rose Parade, Triathlons,
5k/10k, many other various events

Current Member LAFD ACS: Past member LA County
DCS

Use Mobile, Base and HT's
Mobile on Motorcycle, Bicycle, even Horseback (don't
ask.... :-)

My talk will touch on:

MARC (Motorcycling Amateur Radio Club) - a little
background on Radio Installations on Motorcycles -
several examples/variations APRS and as used by
MARC.

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Show –and–Tell

Bring something of interest to the meeting to show and share your story.
Something old, new, or just of interest to hams.

Web site: www.FullertonRadioClub.org

May 2017 Board Meeting Minutes

The May 2017 FRC Board meeting was called to order at 7:30pm by President Bob Houghton AD6QF. Others present: Vice President Walter Clark, Treasurer Gene Thorpe KB6CMO and Secretary: Linda Endsley KJ6IHB. Directors: Larry McDavid W6FUB, Paul Broden K6MHD, and Richard Belansky KG6UDD, Members: Joe Moell K0OV and Cheryl Thorpe KE6TZU

Treasurer's report: Savings - \$2,606.98; Checking- \$4,093.01

Minutes from the April Board Meeting were read and approved.

Old Business:

Antennas in the Park event date is May 13. Larry will purchase the food and Albert will cook. Donations will be accepted.

Need to review the Bylaws changes.

New Business:

The Donate Life Run was on April 29 at Cal State Fullerton. Bob Houghton acknowledged Gene for all his work for the Donate Life run. Net Control went smoothly. There was plenty of water. MTZ Productions coordinated items that in the past were staffed by volunteers. There were nine hams that volunteered for the first time helping with the Donate Life run.

Seven renewal memberships were received during the month

Next board meeting: 7 JUNE 2017

Adjourned at 8:00 pm

Submitted by Linda Endsley KJ6IHB

LAST REMINDER!

The Antennas In The Park event is **HERE:**
Saturday, May 13.

Its time for our largest event of the Year; Antennas In The Park this **Saturday, May 13, 2017**. As always, a key feature will be the popular Joe Moell K0OV on-foot T-Hunt, but let's not limit other activities! Last year we had one portable HF station, several pieces of equipment on display, and a drone demonstration. What can we/you think of for this year's event? How about additional portable HF/VHF/UHF or even microwave stations? Or perhaps a demonstration or two – or more – from the TAG group projects? What else? It's up to your imagination!

And something NEW: the event will be at the Izaak Walton Cabin at Hillcrest Park (with restroom). There will be plenty of spaces for set up of radios and antennas. New grass in front of the cabin may necessitate demonstrations to be set up in the cabin. Parking is available at several locations near the cabin. There are two entrances: one off E. Valley View Drive, and one off N. Lemon Street. If you use the Lemon Street entrance you must be coming south from Brea Boulevard, because there is **NO LEFT TURN**

allowed into the park if north bound on Lemon.

At this year's Antennas in the Park we will have a display and demonstration of a communications trailer assembled by three hams, Dennis Baca KD6TUJ, Conrad Lara KG6JEI, and Greg Gibbs KI6RXX. This is the first of three trailers they plan to build. Their goal is to build trailers that can be deployed to support local communities in the case of an emergency.

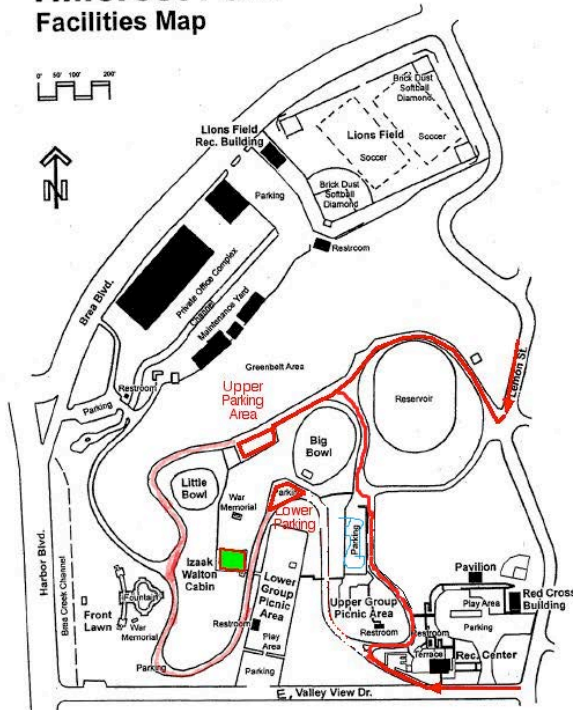
They call themselves ARTTT, for Amateur Radio Tower Trailer Team. The trailer houses a range of radio gear including amateur HF, VHF, and UHF capabilities as well as GMRS, MURS, Marine band, and 27 MHz Citizens Band.

More information can be found at <http://www.workofarttt.org>

We'll have the usual BBQ – club funded, but donations accepted. There will be burgers and hot dogs, plus all the trimmings, plus soft drinks (no alcohol in the park). If someone would like to bring deserts it would be appreciated.

We'll be there from about 9AM. The T-Hunt begins with antenna building at 10AM, and the "hunt" at 11AM. Probably will last until about 3PM.

Hillcrest Park Facilities Map



from north, go south on Lemon St (from Brea Blvd) to park entrance on right. Enter park & follow roadway to stop sign, turn right & curve left to **upper parking area** on the left.

from south, go west on Valley View Dr. (from Lemon St. NOTE: there is no left turn off Lemon into main entry of the park.) to 2nd entry (1st goes into Rec Center etc) . Follow roadway to the right, curve left to stop sign. Continue straight ahead to left curve to **upper parking area** on the left.

If **upper parking area** is full, there is additional parking in **Lower Parking**. Continue following the roadway down hill to the right & back up hill.

A parking lot that requires some steps is located on around the roadway. Those who come in off Valley View Dr. pass it by the stop sign.

A Big Thanks for those of you who participated in the Donate Life Run/Walk event.

Hello Donate Life Run/Walk

Volunteers: My colleague Gavin Sweeney and I wanted to take a moment and **THANK YOU** for your time and support towards the 15th Annual Donate Life Run/Walk. We were able to serve and touch the lives of 13,000 people and inspire them to Donate Life. The success of this event would not have been **possible without YOU**. We sincerely appreciate the energy, flexibility and time you gave us this past Saturday at the Donate Life Run/Walk. As in years past, we have continued to hear nothing but positive and wonderful things about our **AMAZING volunteers**. We hope you enjoyed your time volunteering with us and look forward to you joining us again next year. We would love to get your feedback on your experience in order to help us improve the way we manage the process in the future therefore please click on the link provided below to fill out a short 5 minute survey.

https://www.surveymonkey.com/r/DLRW2017_VolunteerSurvey

Again, **THANK YOU FOR EVERYTHING!**

Sincerely,

Erika Ospina Awad and Gavin Sweeney

Volunteer Operations Team, Donate Life Run/Walk

761 West Kimberly Avenue

Placentia, CA 92870

714-453-3292 (d)

213-200-4559 (c)

213-633-1564 (f)

FRC Transmitter Hunt Report

Glenn Tobey AB6PA and Bill Greganti KG6EEK found a not-used-before location for their hidden transmitter on the April 15, 2017 FRC mobile transmitter hunt. They were just west of John Wayne airport. Unfortunately, they couldn't get an adequate signal to the starting point at first, so they had to hook up a three-element beam and point it at the start.

This transmitting beam was horizontally polarized, but the hiders thought it was vertically polarized and adjusted their direction-finding antennas accordingly. That can be a recipe for bad bearings and a long evening. Two of the teams arrived within 90 minutes, but one hunter didn't find the transmitter that night.

<u>Team Calls</u>	<u>Odo Miles</u>
N6AIN/WA6PYE	28.1
WA6CYY	31.8
WB6JPI	Didn't finish

The next FRC transmitter hunt, with Deryl Crawford N6AIN and Steve Wallis WA6PYE hiding, will be Saturday evening, May 20, starting from the top of Acacia Avenue in Fullerton. The transmitter will go on the air at 8 PM on 146.565 MHz.

73,

Joe Moell K0OV

Dinner Before The Club Meeting

How about joining us for dinner on Wednesday evening just before the Club meeting? We meet at about 5:00PM at Sizzler, just north of the corner of Harbor Boulevard and Valley View/Brea Boulevard (1401 N. Harbor). A bit of QSO, and maybe a chance to meet the evening's presenter before we get started.

TAG Activity Reports of the Fullerton Radio Club

Dick Palmer brought his Tony Parks design SDR radio. It has the strange name of "Receiver Ensemble II". Perhaps the "ensemble" is the gathering of modules. Between the SDR hardware and the HDSR software is an external version of a sound card that has a stereo mic input that is not inside a typical lap top. Then there's the software driver between the sound card and HDSR software. Then there is a USB driver between the HDSR software. Then between HDSR software and the PSK-31 digital demodulation software is "virtual audio cable." He demonstrated it for us with a contact with someone in the mid-west.

Joe Moell showed us one of the two-meter transmitters the transmitter that will be used in the T-Hunt this Saturday at Antennas In The Park. It was made by Byon Garrabrant N6BG of Byonics in Chandler, Arizona. What makes this transmitter ideal for T-hunting is that it can be controlled remotely. Yes it has a receiver in it. In the picture you can see the Velcro used to attach it to something and the metal cable to secure it if the environment is less safe. There's a message carefully written to put people at ease and discourage theft.

Walter Clark was given an old Wimshurst electrostatic generator that he restored. He was then inspired to buy some physics classroom demonstration equipment to go with it. The pinwheel on the right spins but Walter's explanation for the process requires that it works when only connected to the positive output arm of the generator, that the machine demonstrated not to be the case. Clearly the generator didn't read the same Wikipedia page.

Tom Gaccione, WB2LRH, had a receiver failure with his 220 MHz handheld radio during the last Mass Casualty Exercise with Hospital Disaster Group. After researching things on EHam.net, he found that his radio model (Alinco DJ-V27T) had a rash of latent failures due to bad components installed at the time of manufacture. People whom had radios repaired during and after warranty expiration learned that a bad 450 kHz IF filter was installed when the radio was being assembled. Tom was able to get the part number, and for \$10, was able to purchase replacement parts. After a few weeks of trying to figure out how to get the board apart inside the radio, a

coworker was able to help Tom replace the filter. While he had the radio open, he was also able to open up the transmitter to a wider frequency range. Success! Or so he thought.... It turns out there was another failure lurking.... It appears the controller for the radio has had the firmware corrupted. The failure appears when the repeater is set into repeater mode. To be continued....."

Bill Webb showed the ultimate in sales brochure sent to him in the mail by Mazda. It is a video display that of course he instantly hacked in order to put his own videos into it. Bob Houghton remarked that by Christmas, we are bound to see video Christmas cards. Bill also showed off his latest in microcontroller weather station control circuit. The breadboard shown here has a controller that has to be the ultimate in cheapness at \$2 each. It is called ESP8266 which includes a 2.4GHz transceiver. It is more like an Arduino than a Raspberry Pi in that it can only do one program at a time. (He prefers working with the various models of the "Pi" because it is more like a PC.) This breadboard has just humidity and temperature but it communicates over the air to a Raspberry Pi unit that has Alexa. Bill said that accessing it with an Alexa command made the project much harder.

Tom Marino is a protégé of Dick Palmer. He was very proud to show off the 80 meter band coil he wound himself for his Pac-12 design antenna. He has made it entirely on his own with some guidance from Dick Palmer. The coil he is holding was tuned using an SWR meter and removing turns one at a time until he found a minimum.

Larry McDavid had three things to share. The first picture shows a Hewlett Packard E1938 double oven crystal oscillator (OCXO), an upgrade from the venerable HP 10811 OCXO. It is said to be the most accurate OCXO type frequency standard available. He bought it on eBay for about \$60. He also acquired a Motorola M12+ GPS receiver (\$30) with enclosure from TAPR (https://www.tapr.org/gps_exp-kit.html) that is equipped to output a once per second pulse in addition to the NMEA sentences that includes the absolute value for the time as well as all the geo data. The last picture shows a new style of crimper for easier-to-install ICC "EZ" RJ-45 plugs of CAT-5 cables. It is unique in that it not only makes contact with the conductors, but cuts the ends off to the perfect dimension.

Larry is a "time nut" and so the discussion went on to other than the most accurate. One thread of discussion

was about a Heathkit clock called the GC-1000 "Most Accurate Clock." Some ham bought the Heathkit name and is making himself very unpopular by not allowing the Heathkit manuals to be available for free. He has released a new Heathkit line-powered synchronous digital LED clock. The circuit uses the 60 Hz line as its reference, which is no longer maintained at high accuracy by the power generation stations. The thread of discussion led to how does Edison (and Anaheim Power) control their frequency for use by clocks and to make switching take place without blowing out the generators. Tom Gaccione was assigned the homework assignment to find out how steam is used to adjust frequency.

Bob Houghton brought yet another bargain from China. What is too remarkable about this VOM is the current clamp. It works at DC. Some of us incredulous that it was capable of DC. Traditionally, ferrite clamps act like the core of a transformer so that a voltage can be measured being induced around the ferrite inside the meter. This meter somehow conveys the static magnetic field to a Hall Effect transducer. It can measure down to milliamps of direct current. This is something of a breakthrough in that normally those kinds of currents can only be measured by breaking the circuit and then soldering it back together. Alas the clamp is awfully big.

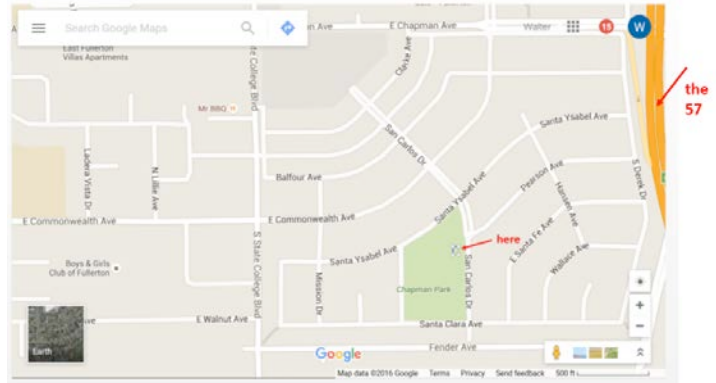
Dick Bremer brought in an old piece of test equipment he built many years ago to help Walter in his current project. It converts the signal out of a handi-talkie to the microwave band. Walter purchased an SDR radio (\$160 Airspy) and is attempting to use a satellite dish LNB as a transverter for the X-band. Walter can see his own microwave sources but they are very strong sources and difficult to reduce to near noise level. They also move about in frequency. His goal is to see the microwave beacon on Santiago Peak. He has driven to where it can be seen line of sight but no dice. After the meeting, Dick tried to get his weak source to be used as a test. But it too was too difficult to reduce enough in power.

Monthly FRC meetings are held at:
Chapman Activity Center

2515 San Carlos Dr.
 Fullerton, CA
 March meeting will be:
**Wednesday,
 May 17, 2017**

Dinner before the meeting: 5:00 PM – at:
Sizzler
1401 N. Harbor Blvd.
Fullerton

Meeting time: 7:00 PM
Visitors are welcome



Chapman Activity Center

FRC Board Meeting

Open to all Club members

Marie Callender's Restaurant
 126 Yorba Linda Blvd., Placentia
 First Wednesday of each month.

Next Board Meeting
June 7, 2017

QSO and dinner; 7:00 PM
Meeting: 7:30 PM

MEMBERSHIP RENEWAL / APPLICATION

Fullerton Radio Club
 PO Box 545, Fullerton, CA 92836

(Please Print)

Name #1 _____	Call: _____	Class: _____
Name #2 _____	Call: _____	Class: _____
Address: _____	City: _____	State/Zip: _____
Phone #1: _____	Email #1: _____	
Phone #2: _____	Email #2: _____	

ARRL Member Yes No

Special Amateur Radio Interests: _____

Dues are \$20 per member, or \$25 per family. Students (full time) \$10
Bring your application and dues payment to the next meeting or mail to the above address.